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HOW TO SELECT A SOUND HORSE



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TEMPERAMENT, conformation, action, soundness, training, age, and adaptability to the work to be performed are the most important factors to be considered when choosing a serviceable horse.

A systematic, thorough examination of the animal will minimize the chances of overlooking important points. Ample time should be taken to make such an examination.

Common faults of conformation, from a utility standpoint, are: Narrow chest; straight, short shoulders; shallow barrels; long, weak couplings and loins; poorly developed muscles in the hind quarters; and, weak, improperly formed legs and feet.

Common unsoundnesses that impair a horse's usefulness for most tasks are: Bone spavin; extreme fistula; extreme atrophy of the muscles; roaring; heaves; ringbone; curb; splints, when close to the knee; and sidebones.

Serious faults of temperament are: Balking, kicking, rearing, backing, halter pulling, and shying.

In the final judgment of a horse's suitability, weigh the good qualities against the defects.

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HOW TO SELECT A SOUND HORSE

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A THOROUGH EXAMINATION ESSENTIAL

An understanding of the desirable and undesirable features, conditions, and points that may be found in horses, together with a knowledge of their specific and relative values, will enable the purchaser to select a better animal, with a considerable saving of time, inconvenience, and expense. Also, a thorough examination of the horse for various forms of blemish, vice, faulty conformation, and unsoundness that may be present is absolutely essential, if serviceableness is to be secured. Moreover, a definite method of procedure should be adhered to in making the examination. It should correspond to the order in which the various steps most conveniently present themselves. Figure 1 names the different regions of the horse to which attention should be given; figure 2 shows the points at which the more common unsoundnesses occur.

STABLE VICES

Evidences of stable vices can best be seen by observing a horse in his stall.

Halter pulling.—Horses wearing extra heavy halters (particularly heavy rope halters) or a rope around the neck should be suspected of halter pulling. Likewise, a rope tied from one stall partition to the other at about the height of the quarters, or the use of what is known as the body rope, may indicate this defect.

Cribbing and wind sucking.—Horses that suck air through the mouth, accompanying this with a grunting sound, are termed wind suckers. Cribbers or crib biters press their teeth on some object, such as the manger, while sucking in air. They may be detected in two ways: First, by a characteristic wearing of the teeth, which can result from cribbing; and second, by the presence of a snugly buckled halter strap, which is sometimes used to restrain cribbers. Horses with these habits fill their stomachs and intestines with air, which gives a bloated appearance to the abdomen. Such animals are hard to keep in good condition and are somewhat subject to colic.

Kicking.—Heavy chains suspended from the ceiling and hanging close to a horse's hind legs, the use of chain hobbles, scars on the hind legs, and shoe prints on the stable partitions are evidences of stall kicking.

¹ Mr. Reese resigned in December, 1926. Revised by S. R. Speelman, animal husbandman, Animal Husbandry Division, Bureau of Animal Industry.

Stall walking and stall trotting.—Energy-consuming vices which indicate a restless, nervous temperament are stall walking and stall trotting. An animal addicted to the former may be identified by well-beaten paths around the borders of his box stall, while the latter vice (indulged in by horses tied in their stalls) manifests itself in a trotting motion of the feet. Stall trotting is not so common as stall walking.

Weaving.—Weavers throw their heads and fore quarters from one side to the other and are objectionable because they use up energy

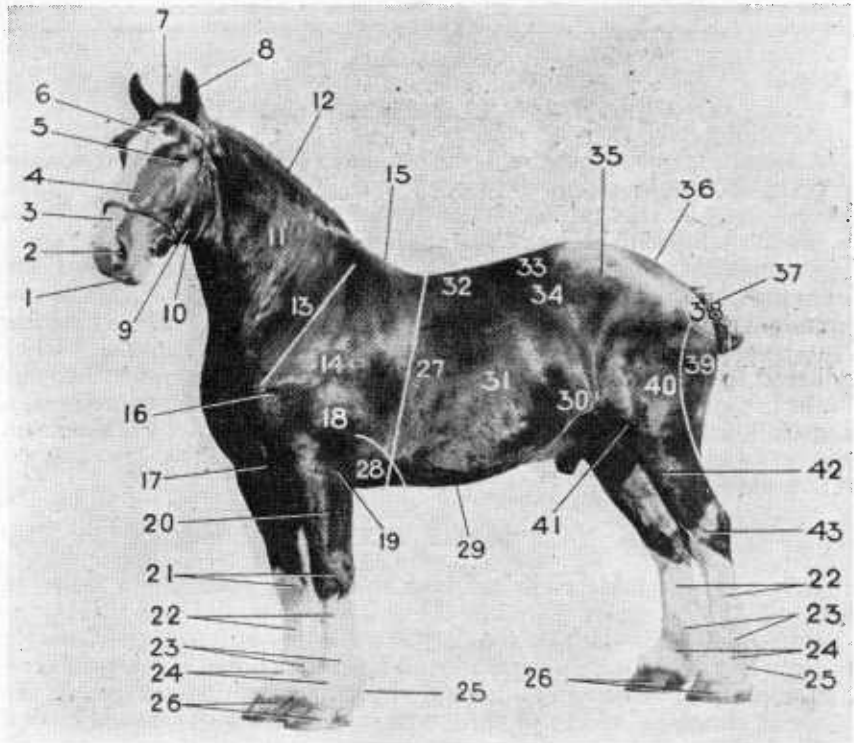


FIGURE 1.—Points of the horse: 1, mouth; 2, nostril; 3, nose; 4, face; 5, eye; 6, forehead; 7, poll; 8, ear; 9, lower jaw; 10, throatlatch; 11, neck; 12, crest; 13, shoulder bed; 14, shoulder; 15, withers; 16, point of shoulder; 17, breast; 18, arm; 19, elbow; 20, forearm; 21, knees; 22, canons; 23, fetlocks; 24, pasterns; 25, feather; 26, feet; 27, heart girth; 28, fore flank; 29, underline; 30, hind flank; 31, barrel; 32, back; 33, loin; 34, coupling; 35, hip; 36, croup; 37, tail; 38, buttock; 39, quarters; 40, thigh; 41, stifle; 42, gaskin; 43, hock.

that may be needed for other purposes. They frequently stand wide on their forefeet.

Minor stable vices.—Other less important vices which may be ascertained by a stall examination are: Rubbing the mane or tail, chewing the manger, and biting and throwing back the ears when approached.

GENERAL APPEARANCE OF A HORSE

Have the horse led out of the stable, so that he may be inspected in a good light and on a level and solid footing. Normal health is

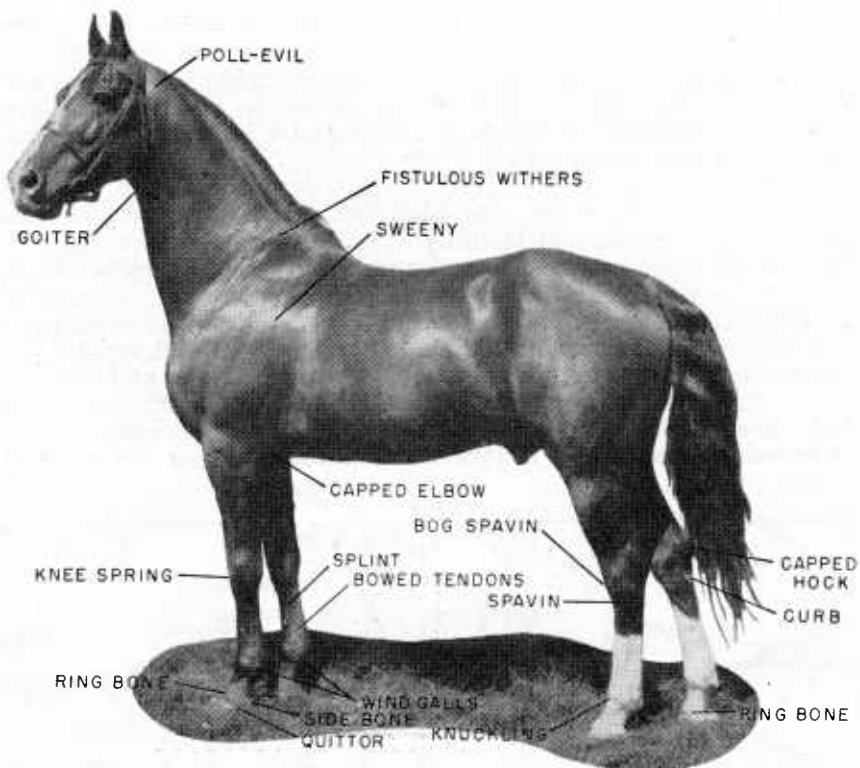


FIGURE 2.—Location of points of common unsoundness in horses.

indicated by an alert, graceful carriage, rich, lustrous coat, and good condition of flesh. If backed out of a single stall, look closely for extreme flexion of the hind legs, known as stringhalt, which is discussed later. Take a general survey of the horse from the front, rear, and both sides, so as to determine whether he is or is not built on the lines suitable to do the work for which he is wanted. Usually, other things being equal, the heavier the horse the more it may be worth for draft purposes. In fact, size is at a pre-

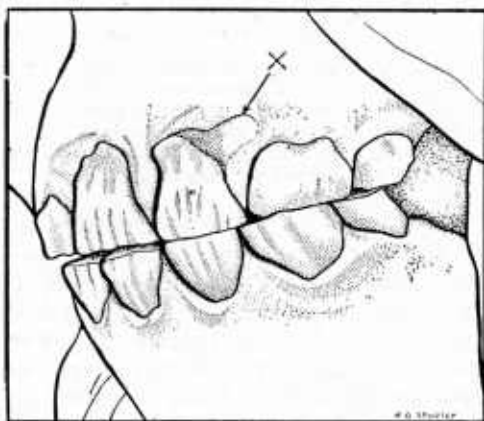


FIGURE 3.—Appearance of the mouth between $2\frac{1}{2}$ and 3 years of age. The middle pair of temporary incisors above and below are replaced by permanent teeth at this age. A permanent tooth is making its appearance at X.

mium for many purposes. Undersized horses seldom bring top prices.

The height of a horse is determined by measuring the vertical distance from the highest point of the withers to the ground. The distance is expressed in hands, a hand being 4 inches. Most horses are from 15 to 16 hands high.

Temperament.—The temperament of a horse furnishes evidence concerning his disposition and his nerve force. For instance, the nervous, excitable animal (lacking a strong nervous system) is hard to control under many circumstances, while the sluggish, phlegmatic horse, though docile, lacks ambition and endurance. Generally, desirable temperament is indicated by large, mild, bright eyes; good width between the eyes and behind the ears; forehead neither too concave nor too convex; willing obedience to commands; and an alert, active, graceful carriage when in motion. Temperament and disposition are influenced to some degree by training and handling, so that it is well to keep these factors in mind when testing the horse at work.

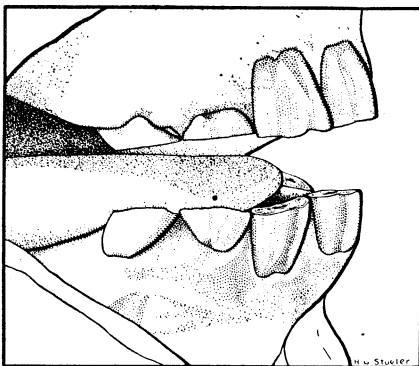


FIGURE 4.—The teeth at past 3 years. The gums are inflamed around the second pair of temporary teeth, showing that they will soon be replaced by permanent teeth, when the animal will be considered 4 years old.

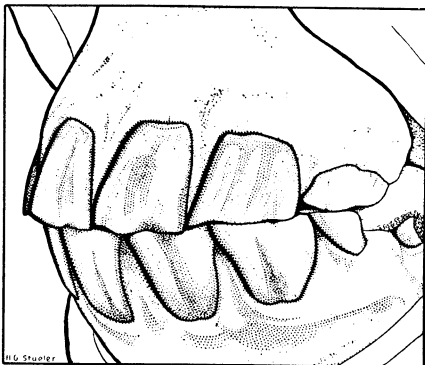


FIGURE 5.—A typical 4-year-old mouth. The two middle pairs of incisors above and below are permanent. The outside pairs are temporary teeth, the latter being detected by their white appearance and small size.

Quality.—Quality is denoted by fine texture in all the parts that go to make up a horse. It is not possible to examine all these parts, but those exposed to view will give a good idea of the others, since in animals there usually is analogy between the various parts. Prominent external indications of quality in a horse are a covering of fine, snugly fitting skin and soft hair. Quality also finds expression in thoroughly defined lines between the various regions, in clean-cut features, and in a general refinement of tissue and breediness throughout.

It is a well-known fact that often the smaller bones taken from the well-bred horse have more actual strength than the larger but coarser ones taken from others. This no doubt applies in a large degree to all the other tissues, and for this reason it is to be expected that the animal with quality will have the durability and endurance necessary to per-

form hard work for an extended period of time better than an individual of inferior merit.

Color.—Horses with any of the dark, solid colors, such as bay, brown, chestnut, and black, are serviceable and sell readily. Often dark grays are in demand for draft, show, and hunting purposes, but for other uses they are generally slow sellers, because they turn white with age. Pink-skinned whites, duns, mouse colors, and spotted colors sell at a discount except for uses where unusual or gaudy colors are wanted. Grays have the reputation of standing the effect of the hot sun unusually well, whereas dark browns and blacks often sunburn readily. White marks on the legs and face are sometimes desirable for show purposes, since they give a horse a flashy appearance.

Age.—For immediate hard service a horse should not be much younger than 5 years. Often a horse's value begins to depreciate when he is 8 to 10 years old, but he may be useful with good care until he is over 20. The teeth indicate the age of a horse, especially from 3 to 8 years. (Figures 3 to 11.)²

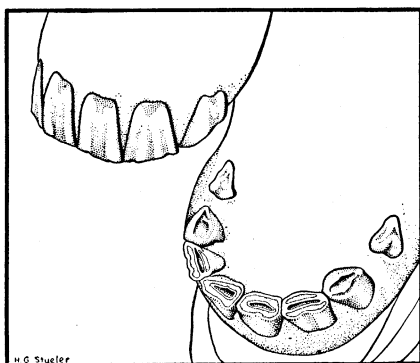


FIGURE 6.—A 5-year-old or full mouth. All the incisor teeth are permanent, but the corner incisors have not yet come into wear.

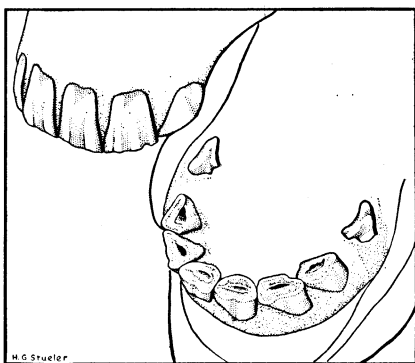


FIGURE 7.—At 6 years the cups in the center pair of incisors are almost obliterated by the wearing down of the teeth. The remaining teeth show well-defined cups.

THE FOREPARTS

Head.—The head should be well proportioned, refined, and clean-cut. It should not be either too concave or convex between the eyes, the former suggesting a timid disposition, the latter strong will power. Compare the sides of the face and note any dissimilarity which may be due to disease. The side view of the head should show a comparatively straight line from the poll to the nose. Extremely heavy jaws are not desirable, especially in horses of the lighter classes.

Mouth.—The mouth should be examined for unsound or abnormal teeth. In the condition known as parrot mouth the front upper teeth overlap those below, while in reverse parrot mouth the lower front teeth overlap those above. If either condition is present the horse is not able to bite off feed; and while he may eat hay and grain by getting them into his mouth with his lips, he would starve on short pasture. A tongue held outside the mouth is unsightly.

² For more detailed information on determining the age of horses consult Farmers' Bulletin 1721, Determining the Age of Farm Animals by Their Teeth.

Muzzle.—The nostrils should be large, clear, and pliable, with the inside rose colored at rest and deep red during exercise. Nostrils constantly distended and hard should lead one to suspect heaves, a disease which is discussed later. Note whether the nose is deformed or crooked—conditions which mar the horse's looks. If the underlip is not held firmly against the upper it may be due to a lack of vigor. Frequent application of a device known as a twitch leaves scars around the upper lip. This would lead one to suspect that the horse has some bad habit, such as being difficult to shoe.

Face.—Look for blemishes from operations such as on bad teeth or nasal tumors, conditions which may cause trouble after apparently being cured.

Eyes.—Before beginning an examination of the eyes be sure that these important and often unnoticeably defective organs are turned toward a good light. Large, full, well-placed eyes, preferably of a chestnut hue with a sparkle and a mild expression, are beautiful in appearance and are the least subject to disease. Small, sunken eyes are often weak and may accompany a sluggish temperament. Lacerations on the eyelids are more or less unsightly and give evidence of a previous injury which may have left the eye weak, especially if the

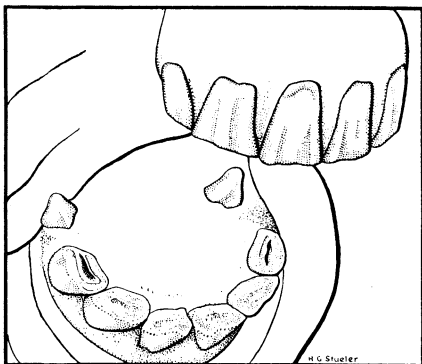


FIGURE 8.—A 7-year-old mouth. The cups show plainly only in the outside pair of incisors in the lower jaw.

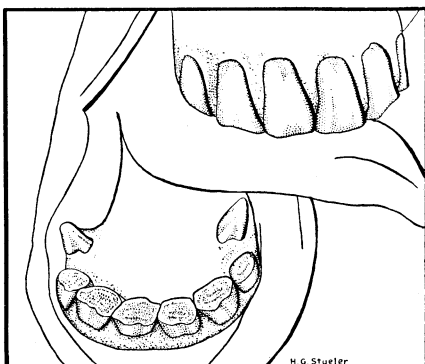


FIGURE 9.—An 8-year-old mouth. The cups are worn out of all the lower teeth.

eye sheds tears frequently. To test the sight make a quick motion of the hand and see if the lids are closed to protect the eyeballs. In doing this it is necessary to be careful not to cause a current of air to strike the eye, since a blind horse may close the eyelid from such a cause alone. If still doubtful about the sight have the animal led over obstacles over which a blind horse would stumble, in which case a horse with good sight will carefully raise and plant his feet over them. A more detailed test consists in taking the horse from darkness to light, and vice versa, and seeing that the pupils dilate and contract alike. Totally blind horses generally hold their heads sideways. Hollows over the eyes denote old age or a lack of vitality. Unscrupulous dealers have sometimes inflated these hollows with air, but this can readily be detected by pressing with the fingers, which forces the air into the adjacent cavities, leaving the natural hollowness.

Ears.—Horses are not often troubled with deafness; still it is advisable to test the hearing by noting responses to the voice. The ears

should be placed fairly close together at the highest point of the poll and should usually be carried forward. To add to the appearance they should be of delicate texture, taper to graceful points, and be covered with fine hair. Lopped ears are very unsightly. Many tricks are used to cover up such defects, such as tying together with fine

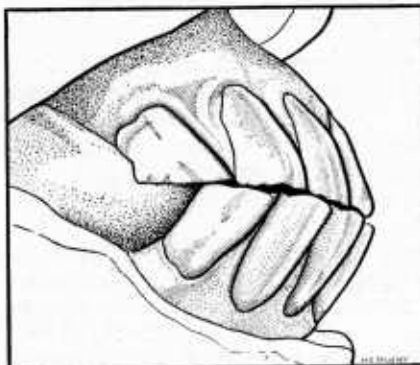


FIGURE 10.—A 14-year-old mouth. After 8 years the age is estimated by the angle at which the incisors come together, by their length, and by the shape of the wearing surface. The older the horse the nearer this surface approaches a triangle. It is practically impossible to estimate the age correctly after the cups have disappeared from the teeth.

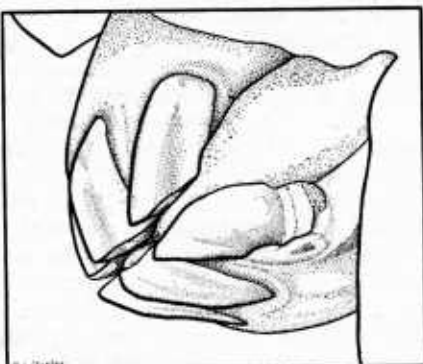


FIGURE 11.—A 22-year-old mouth. The incisors meet at an acute angle and the wearing surfaces have a triangular shape.

thread the ear nets which the horse may be wearing; or the ears themselves may be tied together, the hairs of the foretop hiding the thread. Slight operations are also performed with the object of remedying this defect. Cropping or splitting the ears simply disfigures them.

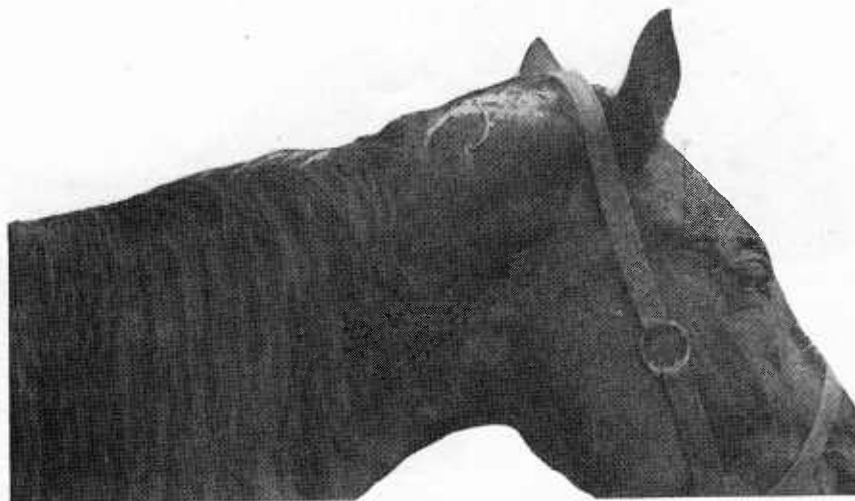


FIGURE 12.—Poll evil.

Horses that constantly keep the ears moving should be suspected of being blind or of bad temperament.

Poll.—The poll should be examined for signs of poll evil (fig. 12), a disease caused by bruising the top of the head. Inflammation in this region, usually accompanied by discharge of pus, would lead one to suspect this disease, which is often slow to yield to treatment and which may break out again after it is thought to be cured. It often leaves ugly scars after healing.

Neck.—A clean-cut throatlatch on a crested neck of good length gives a horse style and beauty of outline and consequently enhances his value. In mature stallions the development of a full crest is an indication of masculinity. Evidences of bleeding, indicating previous bad health, should be looked for on the jugular vein, and it is also advisable to lay back the mane and look for scars. The neck should join the shoulders smoothly.

Shoulders.—Short shoulders do not generally indicate sufficient room for a large heart and for lungs capable of handling a maximum quantity of air. Straight shoulders favor a low, short, stubby action of the front feet. A low carriage of the head, with a heavy, irresponsible mouth are often associated with a long back and a correspondingly short underline, whereas the opposite proportions, namely, a short back and a long underline, are desirable. The concussions or jars on the front legs resulting from their striking the ground are considerably relieved by sloping shoulders, while straight shoulders, by not having this effect, tend to promote early unsoundness of these limbs. Strong constitution, endurance, good front action, and style are associated with deep, well-sloped shoulders. For draft purposes the shoulders should have pronounced offsets, so that the face of the collar will have plenty of bearing surface. Figure 13 shows a shoul-

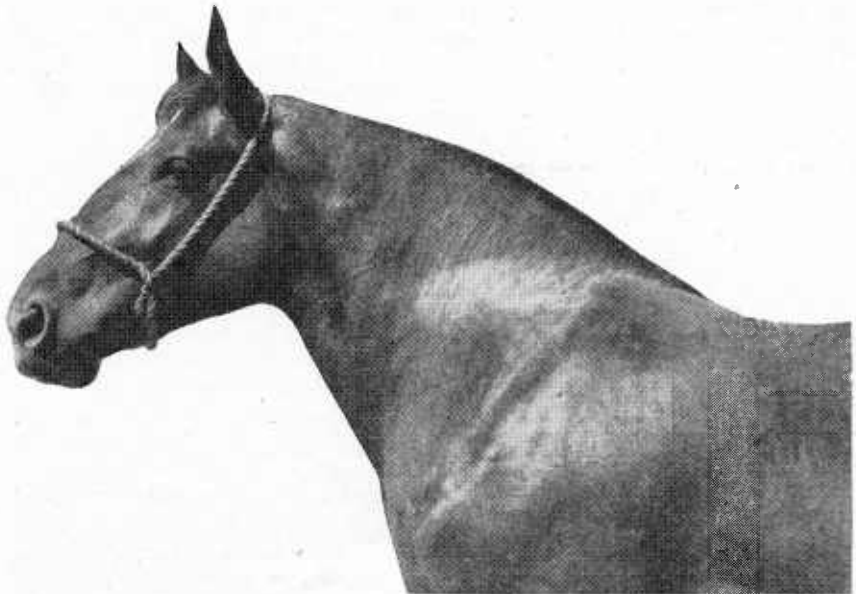


FIGURE 13.—Deep, well-sloped shoulders which make a good seat for the collar. Desirable conformation for the draft horse.

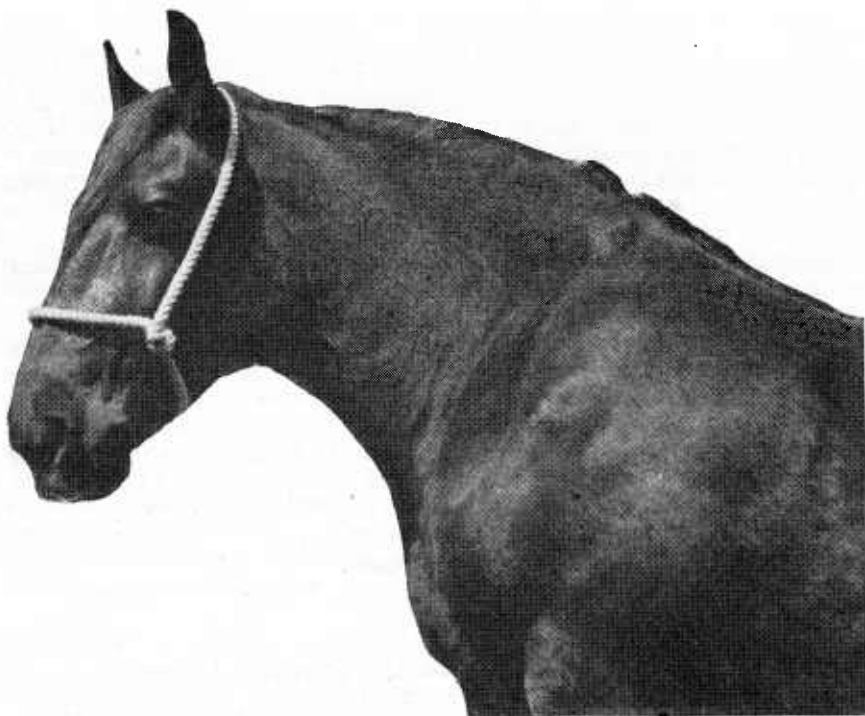


FIGURE 14.—Straight shoulders. Undesirable conformation and usually associated with short, stubby pasterns.

der of proper conformation to receive a collar. The position of the collar on such a shoulder is not materially changed, no matter how hard the pull. On shoulders such as those shown in figure 14 the heavier the pull the tighter the collar is squeezed back, with the result that the skin and muscles beneath the collar are apt to become sore. Sharp, thin, prominent withers add depth and wearing qualities to the shoulder. Withers that run well into the back in the saddle horse aid in holding the saddle in place. Compare figures 13 and 14.

Examine the withers for fistula, a disease similar to poll evil, except that it is differently located. Fistula is thought to result from bruising the withers, the resulting inflammation and pus being slow to yield to treatment, so that cases are often of very long standing. The disease sometimes appears to be of very minor importance, but figure 15 shows the large amount of tissue that may become involved. Fistula should not be confused with collar sores, which are often found on the top of the neck just in front of the withers. Collar sores also often occur on the sides of the neck. When not of too long standing they heal readily, if on properly formed shoulders. Calloused thickened spots resulting from old collar sores are apt to get sore again unless the collar can be kept from pressing on them. In so-called sweenied shoulders the muscles have atrophied or shrunk, and horses with such defects are practically valueless for work, for the time being at least. Attempts are sometimes made to hide this trouble by applying irritants or by blowing air beneath the

skin, giving the normal full appearance. Atrophied shoulder muscles may recover their size and development by the removal of lameness which often arises from injury or inflammation below the knee.

Chest.—A wide chest provides abundant room for the heart and lungs; consequently a horse with such conformation would be likely to have a strong constitution. Excessive width in the chest, however, with the forelegs set too near the outside, is liable to cause the horse to paddle with his front feet. On the other hand, a narrow chest is generally associated with a weak constitution and forelegs set too close together, predisposing the horse to strike these limbs together when moving. Scars on the chest are not generally any more objectionable than their disfiguring appearance.

Forelegs.—The proper and the faulty direction of the forelegs when viewed from the front are shown in figure 16. A vertical line from the point of the shoulder should fall on the center of the knee, cannon, pastern, and foot. The right conformation is shown at A; in B the forefeet toe out; in C the bowed legs are weak; D shows the extreme of knees set close together with toes pointing outward, and horses with such conformation almost invariably interfere; E illustrates a form of conformation predisposing to interfering; in F the knees are set close together, showing a tendency to knee hitting; while in G the subject will wing or throw out his feet as they are elevated, which retards action.

The forelegs when viewed from the side should have the general direction of A in figure 17. A vertical line from the center of the elbow joint should fall on the knee and pastern and back of the foot, and a vertical line from the middle of the arm should fall on the center of the foot. A represents the right conformation; B shows forelegs too far under the body; in C they are too far advanced; in D the subject is knee-sprung; and in E is illustrated what is commonly known as calf leg. Knee-sprung horses are apt to stumble; calf-legged horses often are sore in their forelegs after they have been used a while.

The structural examination of the forelegs logically begins with the forearm, which should show strong muscular development on the outside just below its junction with the shoulder. For speed it should be much longer than the cannon. The kneecap should be broad. Scars on the inside of the knee may come from the horse's hitting these members in moving. Figure 18 shows a cannon too light just below the knee, while figure 19 illustrates a conformation that will give better service. The cannon in which the tendons and bones show prominently beneath the skin will stand hard wear, because the tissues are of a dense, tough character.

The fetlock joint should be large enough to denote strength without being coarse. Pasterns that are moderately long and that slope at an angle of about 45° with the ground aid in producing elastic, springy action and will absorb concussions or jars much better than short, upright pasterns. Pasterns too long and too near the horizontal are weak. The foot that is not too wide or too narrow and long, but which is fairly concave, with the frog and bars prominent, will have durability. Low or contracted heels are more liable to become unsound than are fairly deep and open heels. Cracks and many nail holes indicate poor quality of the hoof.

The following are unsoundness and blemishes of the forelegs: Shoe boils, which are classed as blemishes, are caused by the horse lying down cow fashion, thus pressing the elbow with the shoe. The elbows are sometimes irritated by the girth, which can easily be padded or properly placed, thus avoiding a continuance of the trouble. The



FIGURE 15.—Fistula of long standing. There is considerable inflammation, with hair, skin, and underlying tissues destroyed.

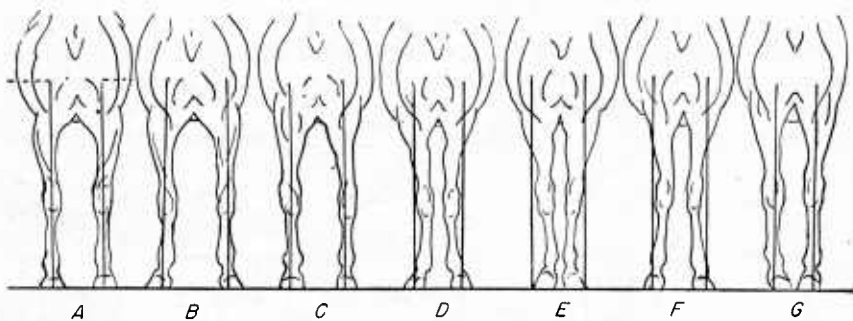


FIGURE 16.—Front view of the forelegs.

forearm is usually free from unsoundness, but it may be blemished by injuries such as wire cuts. Scars on the front of the knees would lead one to suspect a stumbler.

Bony prominences known as splints (fig. 20), found on the inside of the cannon just below the knee, may cause lameness when first developing or when close enough to the knee to interfere with its movement. Splints frequently disappear from young horses.

The front of the cannon may be full, or the tendons at the back may be enlarged, as shown in figure 21; they are conditions brought about by training and racing, and are known, respectively, as bucked shins and bowed tendons. They incapacitate a horse for fast work. The scars often associated with these conditions are due to the firing iron.

Wind puffs, illustrated in figure 22, are due to fast or continuous road work, and while they do not decrease a horse's immediate usefulness, they show that the animal has had considerable use. If the fetlock joint is unduly large it is more or less unsound (fig. 23). This enlargement may be permanent, from an old injury, or it may be due to hard or fast work followed by a lack of exercise, or to disease. The slight fullness that promptly disappears with exercise is about as objectionable as wind puffs, but may lead to scratches, leg sores, or a disease commonly known as milk leg. Interfering when associated with forelegs set close together or with toeing out considerably depreciates the value of a horse, especially for anything other than slow work, and it is to be suspected when scars are found on the inside of the fetlock joint.

Ringbone (fig. 24) is an unsoundness characterized by bony enlargements on the front and sides of the pastern, which cause lameness when developed to sufficient size to interfere with the action of the joints and tendons. These bony prominences can be detected by passing the hand over the pastern if they are not large enough to be seen when in front or at the sides of the forelegs.

Sidebones can be best seen from the front, as shown in figure 25. They occur on the sides of the coronet. When not prominent enough to be noticed by the eye their presence may be detected by grasping the back of the coronet between the thumb and fingers and pressing. If healthy it will yield to pressure; if unsound it will be hard and rigid. Sidebones on the forefeet interfere with action and may cause lameness.

Scratches is the name given to a cracked condition of the skin at the back of the pasterns and over the heels. This trouble is not serious, provided it does not result from other causes, but may be hard to heal unless the horse can remain inactive for some time. The quarters may show scars from hitting this region with the hind foot, which may be due to faulty action or to improper handling or shoeing of a gaited

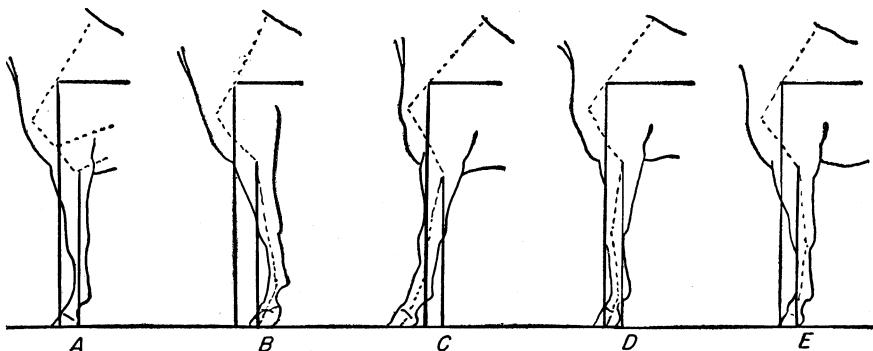


FIGURE 17.—Side view of forelegs.

saddle horse or pacer. Generally, scars resulting from barbed-wire cuts are objectionable only on account of their ugliness.

Pick up a foot and note the willingness with which a horse lets you hold it. This should aid in discovering a subject difficult to shoe. The feet should be free from diseases such as thrush and corns, which hinder action. Navicular disease is to be suspected when a horse stands with a forefoot extended and with only the toe resting on the ground.



FIGURE 18.—A fault of conformation known as "cut out" below the knees. The subject is apt to become knee-sprung.



FIGURE 19.—Forelegs with desirable conformation.



FIGURE 20.—Splint at X.

This disease seriously impedes the gait and usually causes lameness. Slight ridges on the walls of the hoofs parallel with the coronary band may result from stomach and intestinal disorders, while more pronounced ridges close together at the toe and far apart at the heel, if accompanied by dropped sole, would indicate a previous case of founder, a disease which usually leaves a horse sore and stiff in his forefeet.

THE BARREL, OR BODY

Proper conformation of the barrel has much to do with a horse's health and appearance, as it determines to a considerable degree the size and strength of the vital organs. The back should be short and straight, the ribs well sprung from the backbone and of sufficient length to form a deep barrel. The distance between the last, or floating, rib and the point of the hip should be short. The last rib should not be sunken but should be prominent, giving a smooth coupling. With

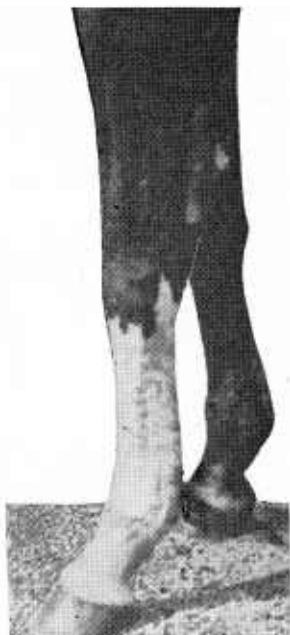


FIGURE 21.—Bowed tendon.



FIGURE 22.—Wind puff at X.



FIGURE 23.—Enlarged fetlock joint.



FIGURE 24.—Ringbone at X.



FIGURE 25.—Sidebone at X.

a short, well-muscled loin and a deep flank (together with a smooth coupling) a horse should be an easy keeper and should not look tucked up or gaunt after a hard day's work.

As regards unsoundness or blemish in these parts, hernia or rupture may occur on the abdomen at or near the navel. Small hernias, such as shown in figure 26, are merely unsightly, while larger ones depreciate a horse's value in direct proportion to their size. The barrel should be free from sitfasts or saddle and girth sores. An enlarged sheath is generally due to disease. Mature stallions should have two prominent testicles; ridgelings have one testicle that has not descended into the scrotum, and while they are often sold as geldings after the descended testicle has been removed they may be very annoying to handle because they have the desires and actions of a stallion. They can be completely castrated only by a severe surgical operation. Mares which have produced colts have well-developed teats.

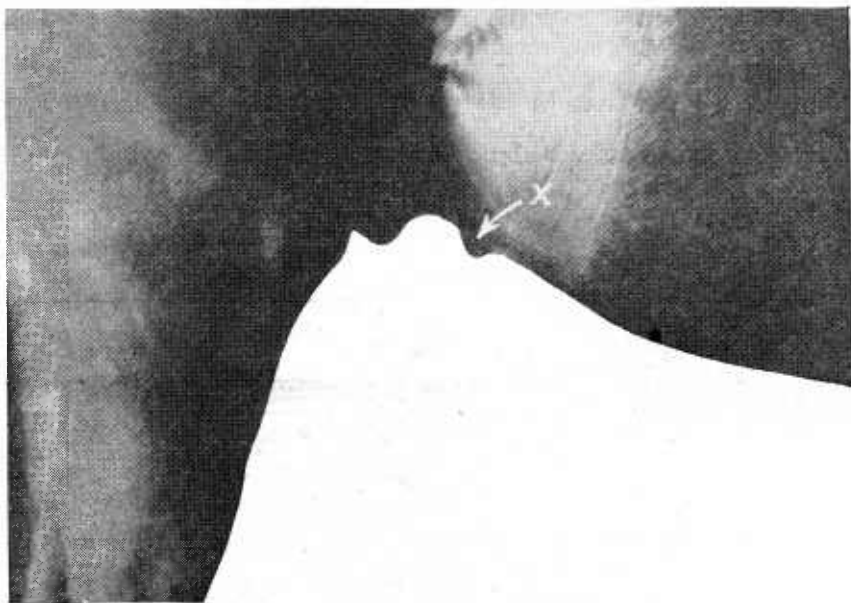


FIGURE 26.—Hernia, or rupture, at X.

THE HIND PARTS

Hind quarters.—Both points of the hips should be similar and on the same level. They should not be too prominent (condition as to flesh being considered), but should be a good distance from the point of the buttock. A low or capped hip detracts from a horse's appearance. In draft horses the hips should be broad, and the muscles on either side should stand well above the level of the spine if the horse is in good order. In the lighter types the hips should be smooth and more nearly circular in outline. In general, width across the hips with proper muscling denotes power. A fairly level croup with the tail attached high gives the horse beauty of outline, and this is increased by a long tail carried out gracefully from the body. A tail

carried to one side or with a crook in it mars the animal's attractiveness. If the tail has been rubbed it may be due to intestinal parasites, external parasites, or high feeding; even if due to habit alone it would be objectionable. Raise the tail and examine for crupper sores, warts, and signs of worms, the latter making the horse dull and hard to keep in flesh. Warts under the tail are usually found on old horses of gray color. They make the tail heavy and interfere with the crupper. The practice of "gingering" causes horses to carry, temporarily, high, unnatural tails. Naturally carried high tails are an indication of spirit and vigor.

The quarters should be round, full, heavily and smoothly muscled, and should strongly join the gaskin; the latter also should be heavily muscled. Quarters separated to an unusual height when viewed from behind characterize an animal lacking a vigorous constitution. Atrophy of the muscles in the region of the stifle joint and dislocation of this joint are conditions which can totally incapacitate. Figure 27 shows quarters and gaskins of good conformation. They are well proportioned and firmly muscled.

Hind legs.—Figure 28, A, illustrates the proper direction of the hind legs viewed from the side. A vertical line from the hip joint should cross the center of the foot and divide the gaskin in the middle; a vertical line from the point of the buttock should coincide with the

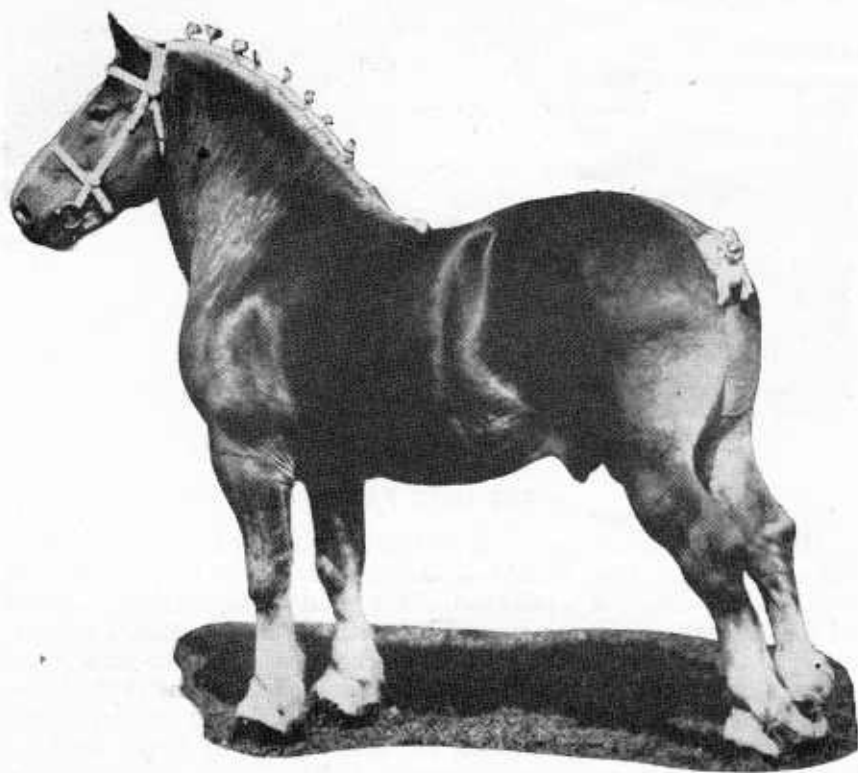


FIGURE 27.—Rear view of a draft horse showing correct conformation of croup, quarters, gaskins, and hind legs.

back of the cannon. In B the hind legs stand too far under the body; in C the hind legs are set too far back; and in D the hock joint is too straight. Other things being equal, the direction shown in A makes the limb stronger and more serviceable than those in B, C, or D.

Viewed from the rear, the hind legs have the greatest strength when they have the direction shown in figure 29, A. This direction is correct when a vertical line from the point of the buttock crosses the center of the hock, cannon, pastern, and foot. B shows hind legs set too far apart, tending to produce a sprawling gait. In C the hind feet toe in or are pigeon-toed, the joints being improperly formed, producing considerable undesirable lateral motion when the feet are carried forward. With such conformation the feet cannot be carried in a straight line. In D the hind legs are set too close together, predisposing the horse to interfere. The condition shown in E is generally known as cow hocked, and hind legs so formed do not have the strength of those in which the columns of bones are placed directly over one another.

Hock.—The angle of the hock determines to a large extent the direction of the hind legs. The greater the angle the straighter the hind legs and the more apt is thoroughpin to develop. If the angle is small the hind leg is crooked and may be weak. Puffy, meaty-looking hocks covered with thick skin and coarse hair are apt to become unsound. Hocks on which the skin fits snugly against the bones and ligaments generally wear the best. Compare the hocks closely and see that they match exactly, as failure to do so would indicate unsoundness, and should cause the horse to be rejected.

A common defect of the conformation of the hind legs is known as "cut out below the hock." In this the junction of the hock with the front edge of the cannon is lacking in development, denoting weakness. It is sometimes associated with the following: The heavy bone on the outside of the hock (shown in fig. 35) extends too near or past the vertical line coinciding with the back of the hind leg, making curb very liable to develop. The cannon of the hind leg is much broader than the cannon of the foreleg. Figure 30 illustrates a fet-

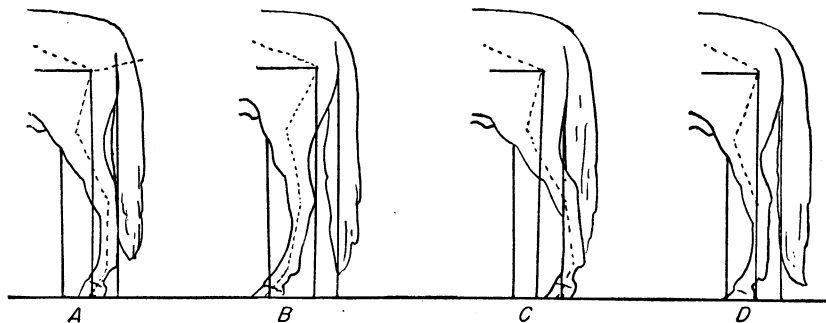


FIGURE 28.—Side view of hind legs.

lock joint that stands over the hoof, called cocked ankle. Contracted tendons at the back of the cannon cause cocked ankle, a condition making the leg stiff and weak. The remainder of the hind leg should correspond in general conformation to that of the foreleg, except that the hind pasterns and hoofs are slightly straighter with the heels slightly higher.

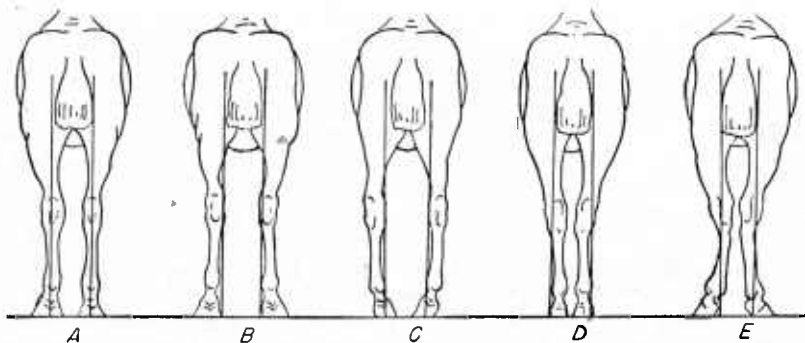


FIGURE 29.—Rear view of hind legs.

Thoroughpin (a very low one is shown in fig. 32) is due to a collection of synovia in the depressions which lie just below the tendon running from the point of the hock into the gaskin. It can best be detected by pressing the swelling on one side of the leg and noting the corresponding filling on the opposite side. Thoroughpin may cause lameness and consequently depreciates the value of the animal. The point of the hock sometimes becomes thickened from a bruise, which condition is shown in figure 33 and is termed capped hock. It does not cause lameness, but is unsightly and may indicate a kicker.

Bog spavin is an enlargement in the natural depression on the inner and front part of the hock, formed by a collection of synovia which is soft to the touch. It can best be seen from obliquely in front, as

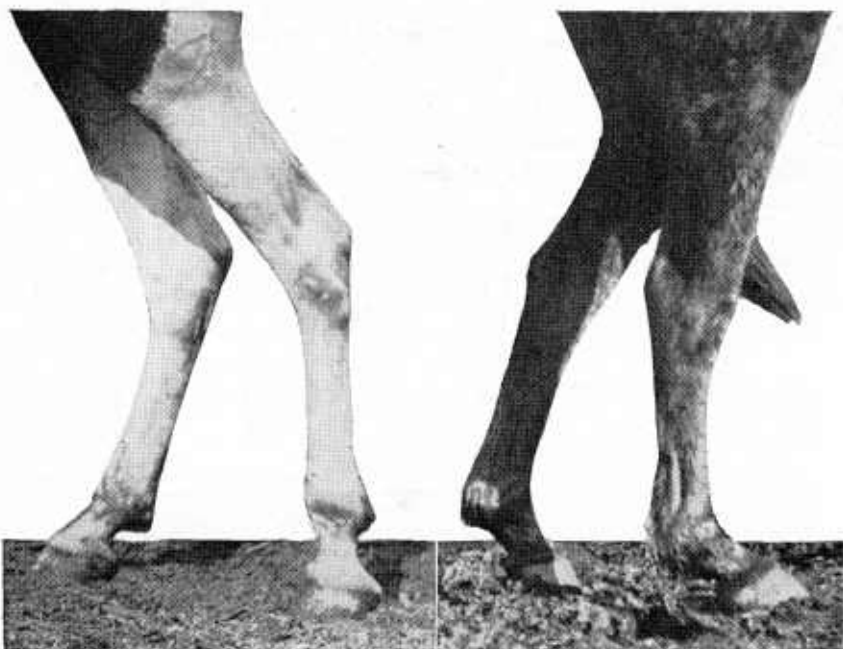


FIGURE 30.—Crooked hind legs with cocked ankles.

FIGURE 31.—Hind legs too straight, with pasterns too sloping.

shown in figure 34. This unsoundness sometimes causes lameness, consequently lessening the animal's value. A large blood vessel passes over this region of the hock, and this may become enlarged, giving the appearance of a bog spavin, but as this condition never leads to lameness it is considered a slight blemish rather than an unsoundness. Fullness at the back of the hock below the point and observed from the side as shown in figure 35 is due to a thickened ligament which may be ossified in long-standing cases and is known as curb. Curb, especially when first developing, causes lameness.

Bone spavin (fig. 36), located on the inside of the hock where the thick bony part tapers into the cannon, is a bony enlargement and can best be detected by comparing the inside of the hind legs from squarely in front or behind. Bone spavin can also often be seen from obliquely in front. If a horse appears to have a bone spavin, the following test will give further proof of its presence, provided the leg carries no other unsoundness that would cause limping. Pick up the suspected leg and hold it for a few minutes in a well-flexed position, then start the animal at a trot as soon as the foot reaches the ground. If bone spavin exists in an active form, the horse will limp.

Stringhalt, a disease characterized by extreme and unnatural flexion of the hind legs, hinders action. It can be most advantageously discerned when a horse backs out of a single stall after being idle for some time.

Splints do not generally occur on the hind legs. Unless developed to an unusual size, sidebones do not interfere with the action of the hind legs. Ringbone frequently occurs on the hind pasterns, and is as objectionable there as on the front pasterns.



FIGURE 32.—Thorough-pin at X.



FIGURE 33.—Capped hock at X.

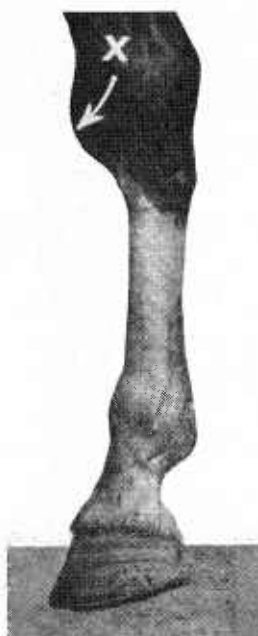


FIGURE 34.—Bog spavin at X.

THE HORSE IN ACTION

Lameness due to a variety of causes and of various forms, some not at first apparent, should be carefully looked for when examining a horse in action. When lameness is present only at certain times it is known as intermittent lameness; consequently it is advisable to examine a horse on several different occasions. In cold lameness the animal will go sound after he is warmed up, while in warm lameness the impediment does not manifest itself until after considerable exercise. Flinching when the horse turns sharply indicates shoulder lameness. The various gaits should be observed from the front, side, and rear, in order that the desirable features and defects may not be overlooked.

Walking.—Perfection in this gait is characterized by the feet being brought up quickly from the ground, by their being carried in a straight line, by lengthy stride, and by the cycle being completed quickly. All these aid in producing a rapid, frictionless walk which is a great asset to horses used for any purpose. The defects of gait which may well be noted while the horse is walking are interfering, winging, toeing in or toeing out, and twisting the hind feet just before they are lifted from the ground, which wears out shoes rapidly and is otherwise undesirable.

Trot.—This gait must be square; that is, it must be without any tendency to wobble, shuffle, or mix gaits, and the hind feet should follow in line with the forefeet. In the roadster and trotting race horse speed is highly valued, while in the park saddle horse a fair



FIGURE 35.—Curb at X.



FIGURE 36.—Bone spavin at X.

degree of nicely balanced knee and hock action is demanded. The highest-prized factor of the fine harness horse expresses itself at the trot in extreme knee and hock action. Even in the draft horse, a square, open, well-balanced trot with good knee and hock action adds many dollars to his selling price. The common defects of the trot are interfering, forging, scalping, sprawling, dwelling, hopping, and knee action without a proportionate amount of hock action or vice versa. Lameness may be detected in the trot when it may not be apparent in other gaits. Either an abundance or lack of energy and ambition is apparent during trotting by the general deportment and carriage.

Pace.—The pacing gait is more or less common in harness horses, and it is useful as a fast road gait on smooth surfaces. The characteristic movements of the limbs in this gait consist in the feet on the same side of the body working in unison and striking the ground simultaneously. The principle defects of the pace are cross-firing, quarter-cutting, and hitting the knees.

Easy gaits.—Plantation horses and 5-gaited saddle horses have special gaits that are usually easy on the rider as well as on the horse. Such gaits are often designated as “slow” and are desired principally for long rides. They are known as the slow pace, fox or dog trot, and running walk. Any one of them may constitute one of the gaits of a 5-gaited horse. A faster easy gait demanded in such a horse is the rack or singlefoot. This is intermediate between the trot and pace, the feet hitting the ground rapidly one at a time, producing a gait easy on the rider but tiring to the horse.

Canter.—The canter, classed as a saddle gait, may be described as a modified, collected, and very slow gallop. It should be graceful, easy, and handily performed.

Wind.—To test the wind have the horse ridden at a very fast gallop, stopping him abruptly so that you may hear the passing of air through the windpipe. In roaring, or broken wind, there will be a whistling sound each time the horse inhales. When a horse is affected with the disease called heaves, it has difficulty in forcing air out of the lungs, causing a peculiar and very characteristic movement in the flanks and abdomen, especially after exertion. Horses affected with heaves usually cough in a characteristic manner after drinking cold water. This cough may also be excited in affected horses by tightly grasping the windpipe at the throatlatch for a short time. A horse's respiration is greatly hindered by either broken wind or heaves.

Adaptability for specific work.—A horse may possess proper conformation, be sound, and have a good action yet still not be well adapted for a specific work; consequently it is very essential that he be thoroughly examined at the work for which he is wanted. If the horse is to be used for heavy hauling or draft purposes, steady pulling under all conditions is an indispensable quality. For harness use the horse should drive promptly and freely with an easy, rapid gait and an alert expression, taking just sufficient hold of the bit to be in hand without causing the driver to pull on the lines. The saddle horse should have an easy, prompt mouth, good style, graceful carriage, and should stand quietly to be mounted and dismounted.

Vices.—Some horses are difficult to harness and object to taking the bit in their mouths; others jump when an attempt is made to place a saddle or harness on their backs; while still others offer a great deal of

resistance to having the crupper placed under their tails, which, if due entirely to general muscular strength and tension, may be an indication of endurance. While being hitched up or mounted the horse should stand quietly and should start promptly but quietly on command. For any purpose the following vices should cause the animal to be rejected: Balking, backing, rearing, kicking, striking with the forefeet, or running away. Less important vices are: Throwing the head up or down, shying, scaring, breaking loose when tied, resting one foot upon the other, grasping the bit between the teeth, rolling with the harness on, or switching the tail over the lines. Occasionally the last-named vice causes the horse to kick, in which case it becomes dangerous.

GENERAL RECOMMENDATIONS

Enlargements or scars (due to deformity, unusual mishap, or uncommon disease) not conforming to any of those discussed should cause a horse to be rejected unless the nature of the cause and the detriment to the value and usefulness of the animal is self-evident.

Experience gained by examining large numbers of horses will aid in quickening the eye and judgment, thereby making it possible to perceive readily any unusual condition, but it should be remembered that a hurried examination is liable to prove a disappointment; consequently plenty of time should be taken in making the examination, because time is much cheaper than money tied up in an unsatisfactory horse. In some countries nine days are allowed by law to the purchaser in which to learn of the serious forms of unsoundness or vice in a horse, so that in this country it would seem fair to allow at least a day for a fair trial when practicable.

If possible, get a history of the animal, and while you are about it get a history of the person having it for sale. So many defects may be covered up by such unfair methods as drugging that it is a good plan to make purchases only from persons with good reputations.

Horses offered at auction sales should preferably be thoroughly examined previous to their being brought into the ring; at least they should be tried out in compliance with the rules of the sale before time for settlement.

Finally, it is well not to form the habit of seeing only the defects, for horses, like people, are seldom perfect; consequently in judging them weigh the good qualities against the bad. A horse should be valued by the amount of service it will perform rather than by its minor shortcomings.